# MAST ARM AND STRAIN POLE INSPECTIONS

## NUMBERS OF STRAIN POLES AND MAST ARMS INSTALLED BY DIVISION

DIVISION	STRAIN	MAST	
	POLES	ARMS	
1	31	75	
2	97	46	
3	73	62	
4	43	6	
5	103	186	
6	39	51	
7	50	13	
8	63	26	
9	6	44	
10			
11	101	18	
12	36	8	
13			
14	44	42	
	686	577	



NORTH CAROLINA DEPARTMENT OF TRANSPORTATION DIVISION OF HIGHWAYS BRIDGE MAINTENANCE UNIT

ATTENTION				
WILLER INCH	_			

#### METAL TRAFFIC SIGNAL POLE INSPECTION REPORT

MUNICIPALITY:	PITTSBORO	STRUC	TURE TYPE ID	SMA-	CA10
COUNTY:	CHATHAM	POLE STRUCTURE NO	185000	SIGNAL ID NO.	08-0001
ROUTE:	US 15-601	POLE	QUADRANT:	NORTHE	AST
LOCATION:	JCT. US 15-501 W/ SAI	JSBURY ST.			
DESCRIPTION	1 ARM, ARCHED GALV	ANIZED STEEL MAST	ARM W/ (4) 1-1	/4"ø A.B. BASE	
PRESENT CONDITION	FAIR	COMPUTE	R UPDATE:		
INSPECTION DATE:	3/06/2003	INSPECTI	ON CYCLE	4 YEAR	₹
INSPECTED BY:	WILLIAM L. YINGER,	PE GPS	READING	35D 43.304	IM N
REVIEWED BY:	TL. BARTOLT			79D 10.617	M W
SPECIAL CONDITIONS	OH POWER APPROX.	B' ABOVE POLE			



LOOKING NORTH

SPECIAL INSPECTION REQUESTED FOR:

X NONE ULTRASONIC TEST OTHER ()





/9/20	002	INSPECTION	RECORD FOR M	ETAL TR	AFFIC SIGNAL POLE	
	IODEOTION TVD		TILEGORD I GIV IIII		INSP. DATE:	3/06/2003
	ISPECTION TYPE			0500		
CC	OUNTY: CH	ATHAM POLE	STRUCTURE NO.:			NORTHEAST
R	OUTE: US 15-5	501		SIGNA	L ID NO.: 08-000	01
L	OCATION: JC	Γ. US 15-501 W/ SAL	ISBURY ST.			
				0015	5005: 7.00-	1
			CODE: 0 - 2 Critical		oor; 5 & 6 Fair; 7 - 9 Go Descr	
_	A Fratian And	Inspection Item		Grade -	NOT VISIBLE	iption
	Footing And Vertical Support	a. Footing b. Base Plate or Cas	tina	7	NOT VISIBLE	
- 1	Anchorage	c. Anchor Rods	d. # of Rods 4	7		
BASE		e. Anchor Rod Nuts	1000	4		
9		f. Grout Below Base		-		
	· · · · · · · · · · · · · · · · · · ·	g. Vertical Support V	Veld to Base Plate	7	* * * * * * * * * * * * * * * * * * * *	
ᅱ	2. Vertical Post	a. Post		7		
.	2. Vertical Post	b. Post Vertical Weld	ds(Seam)	7		
8		c. Post Horizontal W				
<u>E</u>		d. Slip Splice	e. # of Splices -			
ช		f. Pole Top		7		
SAL	Vertical     Support	a. Plates		7		
VERTICAL SUPPORT	Connection To	b. Welds c. Bolts	d. # of Bolts 4	7		
ΛEI	Mast Arm	e. Nuts	u. # or boits	+:-		
		0.1100				
	4. Horizontal	a. Mast Arm A		7		
	Mast Arm	b. Mast Arm Longitu		7		
Σ		c. Mast Arm Splice V		+ :		
AR		d. Bolted Splice f. Slip Splice	e. # of Splices -	+:-		
\ST		h. Orientation of Slip				
ž		i. End Cap		8		
Ι¥		j. Mast Arm B				
HORIZONTAL MAST ARM		k. Mast Arm Longitu		•	<u> </u>	
RZ		I. Mast Arm Splice V		•		
오		m. Bolted Splice o. Slip Splice	n. # of Splices -	+:-		
		g. Orientation of Slip				
		r. End Cap	, opiloo Doll			
5. C	Connection of Signal	Heads to Arm		7	14. Underground Utilities:	
	Connection of Sigr			7		
	Connection of Stra					
	Connection of Light Connection of Can				15.Trenching or Excavation	וי
	Connection of Can			-		
				-		
± į	a. Damping I b. Located fr c. Distance f			-		
_	c. Distance f	rom Pole	feet	<b>=</b>	ipment Used: KET TRUCK	
ent	7.0% (A)		Normal: Excessive	e: BUCK	ALI IKUUK	
Movement		mal Wind	X	_		
δ		fic Induced Wind mal Wind	X	17 Inen	. Man-hours Required	8.0 MHS
12.		fic Induced Wind	x		fic Control Reg'd: YES	X NO
13	Prompt Action No		NO	19. Insp		viewed By: TUS
						1 OF 5

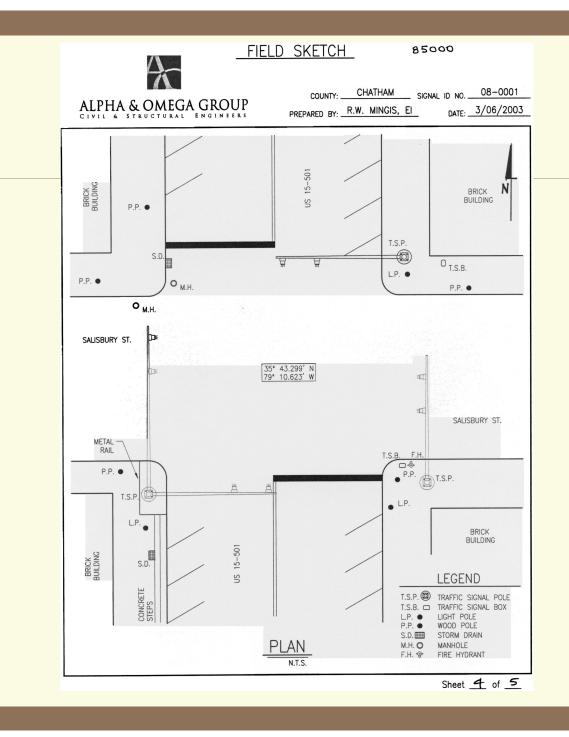
FIELD INSPECTION REPORT INSP. DATE: 3/06/2003 INSPECTION TYPE: ROUTINE POLE QUADRANT: NORTHEAST POLE STRUCTURE NO.: COUNTY: CHATHAM 08-0001 SIGNAL ID NO.: ROUTE: US 15-501 LOCATION: JCT. US 15-501 W/ SALISBURY ST. DESCRIPTION ITEM RATING - NO GRADE There is a brick sidewalk around the base. Appears to be sand (no grout) under 1a FOOTING baseplate. Could not inspect foundation. 1c ANCHOR RODS 7 GOOD Surface rust on projecting ends. 1e ANCHOR ROD 4 POOR No flat washers at anchor bolt nuts (only lock washers). NUTS 7 GOOD Few spots of surface rust. 3a MAST ARM CONN. PLATES 4a MAST ARM A 7 GOOD 1 spot surface rust at 2 ft. from end. 7 GOOD Connection hardware rusted. 5 CONNECTION OF SIGNAL HEADS TO ARM 6 CONNECTION OF 7 GOOD Connection hardware rusted. SIGNS TO ARM

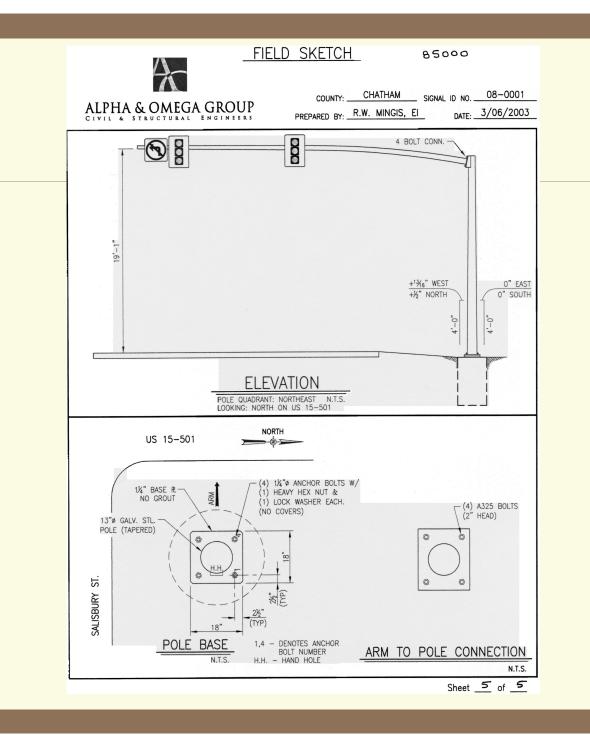
REVIEWED BY: TUS

INSPECTED BY:

WLY

7/9/2002 MAINTENANCE NEEDS INSPECTION TYPE: ROUTINE INSP. DATE: 3/06/2003 COUNTY: CHATHAM POLE STRUCTURE NO.: 185000 POLE QUADRANT: NORTHEAST SIGNAL ID NO .: 08-0001 **ROUTE:** US 15-501 LOCATION: JCT. US 15-501 W/ SALISBURY ST. DESCRIPTION Provide flat washers under lock washers at all 4 anchor bolts. 1 REVIEWED BY: TLB INSPECTED BY:







NORTH CARCUNA DEPARTMENT OF TRANSPORTATION DIVISION OF HIGHWAYS BRIDGE MAINTENANCE UNIT

TTENTION			

#### METAL TRAFFIC SIGNAL POLE INSPECTION REPORT

MUNICIPALITY:	PITTSBORO	STRUC	TURE TYPE ID	SW-C	0815
COUNTY:	CHATHAM	POLE STRUCTURE NO	185003	SIGNAL ID NO.	08-0247
ROUTE	US 64	POLE	QUADRANT:	NORTHE	AST
LOCATION	JCT US 64 W/ NC 87-90	32			
DESCRIPTION	GALVANIZED STEEL S	TRAIN POLE W/ (4) 1-3	4"# A.B. BASE		
PRESENT CONDITION	G000	COMPUTE	R UPDATE:		
INSPECTION DATE:	3/05/2003	INSPECTI	ON CYCLE:	4 YEA	R
INSPECTED BY:	WILLIAM L. YINGER,	PE GPS	READING	35D 43.24	7M N
REVIEWED BY:	T. GLEW ZEB	60		79D 11.203	M W
SPECIAL CONDITIONS	OH POWER / PHONE A	APPROX. 10' SOUTH OF	POLE		



LOOKING EAST

### SPECIAL INSPECTION REQUESTED FOR:

X NONE ULTRASONIC TEST OTHER ( )





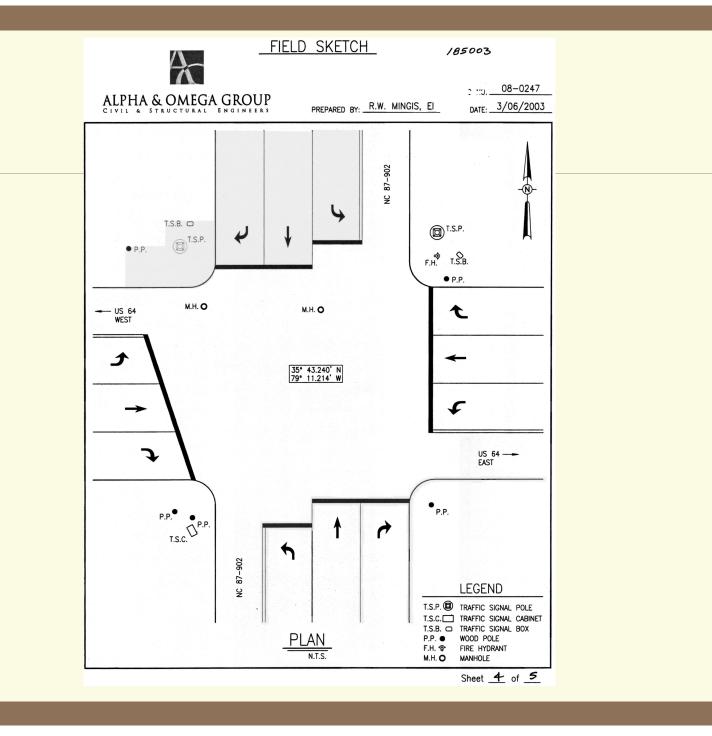
NSP. DATE: 3/06/2003   NORTHEAST   SIGNAL ID NO.: 08-0247   NORTHEAST   NORT	7/9/2	2002	INSPECTION RECORD FOR M	IETAL	TR	AFFIC SIGNAL POLE
COUNTY: CHATHAM   POLE STRUCTURE NO.: /85003   POLE QUADRANT: NORTHEAST	II.	SPECTION TYPE				
ROUTE: US 64   SIGNAL ID NO.: 08-0247				1850	003	
1. Footing And   1. Footing And   Vertical Support   2. Vertical Post   3. Ander Rod   4. T   7. Ander Rod   7. Anchor Rod Nuts   7. Anchor Rod	F	ROUTE: US 64		s	SIGNA	AL ID NO.: 08-0247
Inspection item	L	OCATION: JCT	US 64 W/ NC 87-902			
Inspection item						
1. Footing And Vertical Support   Anchorage						
Varical Support   Canchor Rod Must   Canchor Rod	_	A 5		_		
Anchorage   C. Anchor Rods   d. # of Rods   d. #						NOT VISIBLE
E. Anchor Rod Nuts   F. Grout Below Base Plate   G. Vertical Support Weld to Base Plate   T.					7	
2. Vertical Post   2. Vertical Post   2. Vertical Support Weld to Base Plate   7   7   7   7   7   7   7   7   7	ASE.				7	
2   2   2   2   2   2   2   3   3   2   3   3	8		f. Grout Below Base Plate			NONE
December   December			g. Vertical Support Weld to Base Plate		7	
Description	_	2. Vertical Post	a. Post	+	7	
A. Horizontal   Mast Arm   A   b. Mast Arm A   b. Mast Arm   A   b. Mast Arm   A   b. Mast Arm   A   b. Mast Arm   C. Mast Arm Splice Weld (Butt)   C. Mast Arm Splice   B. Work   C. Mast Arm   C.	-	181			8	
A. Horizontal   Mast Arm   A   b. Mast Arm A   b. Mast Arm   A   b. Mast Arm   A   b. Mast Arm   A   b. Mast Arm   C. Mast Arm Splice Weld (Butt)   C. Mast Arm Splice   B. Work   C. Mast Arm   C.	OR		c. Post Horizontal Welds(Splice)			
A. Horizontal   Mast Arm   A   b. Mast Arm A   b. Mast Arm   A   b. Mast Arm   A   b. Mast Arm   A   b. Mast Arm   C. Mast Arm Splice Weld (Butt)   C. Mast Arm Splice   B. Work   C. Mast Arm   C.	J.P.					NO OLIAIN
A. Horizontal   Mast Arm   A   b. Mast Arm A   b. Mast Arm   A   b. Mast Arm   A   b. Mast Arm   A   b. Mast Arm   C. Mast Arm Splice Weld (Butt)   C. Mast Arm Splice   B. Work   C. Mast Arm   C.	S	0.1/			-	NO CHAIN
A. Horizontal   Mast Arm   A   b. Mast Arm A   b. Mast Arm   A   b. Mast Arm   A   b. Mast Arm   A   b. Mast Arm   C. Mast Arm Splice Weld (Butt)   C. Mast Arm Splice   B. Work   C. Mast Arm   C.	CAI					
A. Horizontal   Mast Arm   A   b. Mast Arm A   b. Mast Arm   A   b. Mast Arm   A   b. Mast Arm   A   b. Mast Arm   C. Mast Arm Splice Weld (Butt)   C. Mast Arm Splice   B. Work   C. Mast Arm   C.	F				-	
A. Horizontal   A. Horizonta	7	Mast Arm		-	-	
Mast Arm					•	
C. Mast Arm Splice Weld (Butt)					•	
d. Bolted Splice   e. # of Splices   -   -       f. Slip Splice   g. # of Splices   -   -     h. Orientation of Slip Splice Bolt     i. End Cap   -     j. Mast Arm B   -     k. Mast Arm Longitudinal Weld (Seam)   -     l. Mast Arm Splice Weld (Butt)   -     m. Bolted Splice   n. # of Splices   -     o. Slip Splice   p. # of Splices   p. # of Splices       o. Slip Splice   p. # of Splices   p. # of Splices       o. Slip Splice   p. # of Splices       o. Slip Splice   p. # of Splices		Mast Arm				
o. Slip Splice p. # of Splices - q. Orientation of Slip Splice Bolt r. End Cap - 14. Underground Utilities:  5. Connection of Signal Heads to Arm - 14. Underground Utilities:  6. Connection of Signal Heads to Arm - 7. Connection of Strain Wires to Pole: 7. Second of Strain Wires to Pole: 9. Connection of Camera to Pole 9. Connection of Camera to Pole 10. Connection of Camera to Arm - 15. Trenching or Excavation:  9. Connection of Camera to Arm - 15. Trenching or Excavation:  15. Trenching or Excavation:  16. Equipment Used:  8. Damping Device(s) - 16. Equipment Used:  8. Damping Device(s) - 17. Insp. Man-hours Required 3.0 MHS	Σ					
o. Slip Splice p. # of Splices - q. Orientation of Slip Splice Bolt r. End Cap - 14. Underground Utilities:  5. Connection of Signal Heads to Arm - 14. Underground Utilities:  6. Connection of Signal Heads to Arm - 7. Connection of Strain Wires to Pole: 7. Second of Strain Wires to Pole: 9. Connection of Camera to Pole 9. Connection of Camera to Pole 10. Connection of Camera to Arm - 15. Trenching or Excavation:  9. Connection of Camera to Arm - 15. Trenching or Excavation:  15. Trenching or Excavation:  16. Equipment Used:  8. Damping Device(s) - 16. Equipment Used:  8. Damping Device(s) - 17. Insp. Man-hours Required 3.0 MHS	AR				-	
o. Slip Splice p. # of Splices - q. Orientation of Slip Splice Bolt r. End Cap - 14. Underground Utilities:  5. Connection of Signal Heads to Arm - 14. Underground Utilities:  6. Connection of Signal Heads to Arm - 7. Connection of Strain Wires to Pole: 7. Second of Strain Wires to Pole: 9. Connection of Camera to Pole 9. Connection of Camera to Pole 10. Connection of Camera to Arm - 15. Trenching or Excavation:  9. Connection of Camera to Arm - 15. Trenching or Excavation:  15. Trenching or Excavation:  16. Equipment Used:  8. Damping Device(s) - 16. Equipment Used:  8. Damping Device(s) - 17. Insp. Man-hours Required 3.0 MHS	ST					
o. Slip Splice p. # of Splices - q. Orientation of Slip Splice Bolt r. End Cap - 14. Underground Utilities:  5. Connection of Signal Heads to Arm - 14. Underground Utilities:  6. Connection of Signal Heads to Arm - 7. Connection of Strain Wires to Pole: 7. Second of Strain Wires to Pole: 9. Connection of Camera to Pole 9. Connection of Camera to Pole 10. Connection of Camera to Arm - 15. Trenching or Excavation:  9. Connection of Camera to Arm - 15. Trenching or Excavation:  15. Trenching or Excavation:  16. Equipment Used:  8. Damping Device(s) - 16. Equipment Used:  8. Damping Device(s) - 17. Insp. Man-hours Required 3.0 MHS	×			T	•	
o. Slip Splice p. # of Splices - q. Orientation of Slip Splice Bolt r. End Cap - 14. Underground Utilities:  5. Connection of Signal Heads to Arm - 14. Underground Utilities:  6. Connection of Signal Heads to Arm - 7. Connection of Strain Wires to Pole: 7. Second of Strain Wires to Pole: 9. Connection of Camera to Pole 9. Connection of Camera to Pole 10. Connection of Camera to Arm - 15. Trenching or Excavation:  9. Connection of Camera to Arm - 15. Trenching or Excavation:  15. Trenching or Excavation:  16. Equipment Used:  8. Damping Device(s) - 16. Equipment Used:  8. Damping Device(s) - 17. Insp. Man-hours Required 3.0 MHS	¥				•	
o. Slip Splice p. # of Splices - q. Orientation of Slip Splice Bolt r. End Cap - 14. Underground Utilities:  5. Connection of Signal Heads to Arm - 14. Underground Utilities:  6. Connection of Signal Heads to Arm - 7. Connection of Strain Wires to Pole: 7. Second of Strain Wires to Pole: 9. Connection of Camera to Pole 9. Connection of Camera to Pole 10. Connection of Camera to Arm - 15. Trenching or Excavation:  9. Connection of Camera to Arm - 15. Trenching or Excavation:  15. Trenching or Excavation:  16. Equipment Used:  8. Damping Device(s) - 16. Equipment Used:  8. Damping Device(s) - 17. Insp. Man-hours Required 3.0 MHS	S		k. Mast Arm Longitudinal Weld (Seam)		•	
o. Slip Splice p. # of Splices - q. Orientation of Slip Splice Bolt r. End Cap - 14. Underground Utilities:  5. Connection of Signal Heads to Arm - 14. Underground Utilities:  6. Connection of Signal Heads to Arm - 7. Connection of Strain Wires to Pole: 7. Second of Strain Wires to Pole: 9. Connection of Camera to Pole 9. Connection of Camera to Pole 10. Connection of Camera to Arm - 15. Trenching or Excavation:  9. Connection of Camera to Arm - 15. Trenching or Excavation:  15. Trenching or Excavation:  16. Equipment Used:  8. Damping Device(s) - 16. Equipment Used:  8. Damping Device(s) - 17. Insp. Man-hours Required 3.0 MHS	RZ			-	-	
q. Orientation of Slip Splice Bolt   r. End Cap   -	오				-	
r. End Cap   -					•	
5. Connection of Signal Heads to Arm 6. Connection of Signs to Arm 7. Connection of Strain Wires to Pole: 9. Connection of Camera to Pole 10. Connection of Camera to Arm				T		
6. Connection of Signs to Arm 7. Connection of Strain Wires to Pole: 9. Connection of Light to Pole: 9. Connection of Camera to Pole 10. Connection of Camera to Pole 11. Connection of Camera to Pole 12. Connection of Camera to Pole 13. Damping Device(s) 14. Located from Pole on 15. Trenching or Excavation: 15. Trenching or Excavation: 16. Equipment Used: 17. Excessive: 18. Located from Pole 19. Located from Pole 10. Dornal Wind 20. Traffic Induced Wind 10. Pole 11. Normal Wind 20. Traffic Induced Wind 21. Insp. Man-hours Required 3.0 MHS	5. C	Connection of Signal I				14. Underground Utilities:
8. Connection of Light to Pole:  9. Connection of Camera to Pole  10. Connection of Camera to Arm  2					-	
9. Connection of Camera to Pole						
10. Connection of Camera to Arm	-				-	
a. Damping Device(s)					-	15. Trenching or Excavation:
Normal   Excessive:   BUCKET TRUCK				-	_	
Normal   Excessive:   BUCKET TRUCK	1.	a. Damping L		-	-	
Normal   Excessive:   BUCKET TRUCK	1	c. Distance fr		16.	. Equ	ipment Used:
D. Fole 1) Normal Wind X 17. msp. Wan-nours required 3.0 mins				_		•
D. Fole 1) Normal Wind X 17. msp. Wan-nours required 3.0 mins	me	a. Arm 1) Norm	nal Wind			
D. Fole 1) Normal Wind X 17. msp. Wan-nours required 3.0 mins	ove	2) Traff	c Induced Wind			
	12. M					
2) Hallic Induced Wind A 16: Hallic Gorido Require 125	Ĺ					
13. Prompt Action Notice Issued NO 19. Insp. By: WLY 17. Reviewed By: TG2	13.	Prompt Action No	tice Issued NO	19.	. Insp	

7/9/2002

FIELD INSPECTION REPORT				
INSPECTION TYPE:	ROUTINE	INSP. DATE:	3/06/2003	
COUNTY: CHATHAM	POLE STRUCTURE NO.: 185003	POLE QUADRANT:	NORTHEAST	
ROUTE: US 64	SIGNAL ID	NO.: 08-0	247	

	ITEM	F	RATING	DESCRIPTION
а	FOOTING	- N	IO GRADE	EThere is asphalt pavement around the base to bottom of base plate. There is a 1-1/2" gap at one corner of the baseplate, allowing partial inspection. Footing is not accessible.
_	BASE PLATE OR CASTING	7	GOOD	Surface rust at anchor bolts. No grout pad and no animal screen.
1c	ANCHOR RODS	7	GOOD	Surface rust at projecting ends.
	ANCHOR ROD NUTS	7	GOOD	Spot surface rust on washers.
1g	VERTICAL SUPPORT BASE PLATE WELD	7	GOOD	At a few locations, galvanized coating is chipped and surface rust beginning.
2a	VERTICAL POST	7	GOOD	1 hand hole cover screw is missing. Few spots of surface rust (top 5 ft.)
7	CONNECTION OF STRAIN WIRES TO POL	7 .E	GOOD	Surface rust on U-Bolt strain wire connection.

7/9/2002 MAINTENANCE NEEDS INSPECTION TYPE: ROUTINE INSP. DATE: POLE STRUCTURE NO.: 185003 POLE QUADRANT: NORTHEAST CHATHAM COUNTY: ROUTE: US 64 SIGNAL ID NO.: 08-0247 LOCATION: JCT US 64 W/ NC 87-902 DESCRIPTION NO. Provide a grout pad or animal screen to prevent access to the pole interior. Verify no interior damage from animal activity. 1 Replace missing hand hole cover screw. 2 REVIEWED BY: TOZ INSPECTED BY: WLY



ALPHA & OMEGA GROUP

FIELD SKETCH

185003

CHATHAM SIGNAL ID NO. 08-0247

PREPARED BY: R.W. MINGIS, EI

DATE: 3/06/2003

